

TRADE AS A FACTOR IN THE RISE AND FALL OF THE INDUS CIVILIZATION

A look at the Indus Civilization during its maturity shows that it was characterized, amongst other features, by the following main ones: (i) systematic town-planning; (ii) orientation of the streets and consequently of the houses almost along the cardinal directions; (iii) underground drainage at certain sites; (iv) use of mud bricks and kiln-fired bricks, both made in a set ratio of 4:2:1 (length: breadth: thickness); (v) construction of fortifications; (vi) division of the settlement into two parts, namely a 'Citadel' and a 'Lower Town'; (vii) monumental buildings like granaries, assembly halls, baths, etc.; (viii) a distinctive script; (ix) use of seals and sealings and (x) of a system of weights and measures; and (xi) a sturdy red ware having certain characteristic shapes and painted designs like pipal-leaf, banana-leaf, intersecting circles, fish-scales and so on.

Let us now examine how many of these features were rooted in the cultural *milieu* that preceded the Mature Stage and how many of them appeared with the advent of the Mature Stage and what can be the implications thereof.

We now know from the evidence of Kile Ghul Mohammad¹ and Mehrgarh² that by ca. 6000 BC neolithic settlements had come into being in the hilly tracts of Baluchistan and on the piedmont areas immediately to the east. By about the beginning of the fourth millennium BC, metal also began to appear and thereafter these early Copper Age settlements started appearing in the valley of the Indus itself, for example at Amri³. Gradually, we come to the stage represented by Kot Diji Period I, Jalilpur Pd. II, Harappa Pd. I, Kalibangan Pd. I and Banawali Pd. I. This stage seems to have been reached by about the end of the fourth millennium BC at some sites and by the beginning of the third millennium BC at others. On the basis of C-14 dates as well as on the evidence of contacts with West Asian sites, the Mature Harappan Stage seems to have been reached by 2500 BC, if not somewhat earlier.

The cultural *milieu* that can be gleaned from the pre-Mature Harappan sites⁴ has given evidence of: (i) town-planning (e.g. Kot Diji Pd. I, Kalibangan Pd. I); (ii) orientation of streets and houses along the cardinal directions (Kot Diji I, Kalibangan I); (iii) construction of fortification (Kot Diji I, Kalibangan I); and even division of the settlement into two parts, as in Banawali IC. During the pre-Mature Harappan Period, bricks of two different ratios were used, viz. 3:2:1 (Kalibangan I) and 4:2:1 (Kot Diji I, Banawali IC), of which the latter was typically Mature Harappan. Though used only for a limited purpose in drains, kiln-fired bricks were known to the people before the Mature Stage. The pre-Mature Harappan people cannot boast of monumental buildings except in the case of

¹ W. A. FAIRSERVIS, "Excavations in the Quetta Valley, West Pakistan", in *Anthropological Papers of American Museum of Natural History* 45 (1956), pt. 2, pp. 169-402.

² J.-F. JARRIGE, "Economy and Society in the Early Chalcolithic/Bronze Age of Baluchistan: New Perspectives from Recent Excavations at Mehrgarh", in H. HAERTEL (ed.), *South Asian Archaeology*, 1979, Berlin, Dietrich Reimer Verlag, 1981, pp. 93-114.

³ J.-M. CASAL, *Fouilles d'Amri*, 2 vols. Paris, Commission des Fouilles Archéologique, 1964.

⁴ B. B. LAL, *The Earliest Civilization of South Asia*, New Delhi, Aryan Books International, 1997.

likely granaries at Mehrgarh, going back to the second half of the fifth millennium BC. In the pottery repertoire of the pre-Mature Harappans there are certain shapes, e.g. flanged vessels, dishes- and cups-on-stand, ring stands, tall cylindrical vases, which remind us of their Mature Harappan counterparts. Of the Mature Harappan motifs, at least some, e.g. the pipal-leaf, banana-leaf, fish-scale and intersecting circles, go back to the earlier times.

As regards the script, the pre-Mature Harappan sites have yielded pottery with graffiti of which quite a few signs are reminiscent of the Mature Harappan ones⁵. However, it is not known if these graffiti had any phonetic values as well. There is evidence of seals way back in the pre-Mature Harappan times, e.g. in Mehrgarh Pd. IV, Rehman Dheri Pd. I and Kunal, but these are not in any way similar to the Mature Harappan ones. The preceding periods have not produced any evidence of weights and measures.

From the foregoing brief survey it would be seen that the most outstanding items that go with the emergence of the Mature Stage of the Indus Civilization are: (i) typical seals and sealings; (ii) weights and measures; and (iii) a system of writing. All these items are clearly connected with trade. The seals were evidently used for sealing commodities sent out whether to destinations within the Indus zone or outside it. The occurrence of as many as sixty-five sealings in the warehouse at Lothal amply attests to it. Likewise, weights and measuring scales were also needed for their respective purposes. A regular system of writing was equally necessary to keep trade-records as well as for administrative purposes.

Though evidence of internal trade does exist during the pre-Mature Harappan days, long-distance trade with Mesopotamia on the one hand and with Central Asia on the other came into being only with the Mature Harappan times. This is fully attested to by the occurrence of typically Indus weights and seals at West Asian sites. Indeed, it is the hunt of precious trade-commodities, e.g. lapis-lazuli,

⁵ B. B. LAL, "Antecedents of the Signs used in the Indus Script: A Discussion", in G. L. POSSEHL (ed.), *South Asian Archaeology Studies*, New Delhi, Oxford and IBH Publishing Co., 1992, pp. 45-55.

that must have prompted the Mature Harappans to establish an outpost at Shortughai in northern Afghanistan. All this happened around 2600-2500 BC which is also the time of the emergence of the Mature Stage of the Indus Civilization.

This spurt in trade must have naturally given rise to an economic boom which, in turn, resulted in a higher standard of living as reflected in the large-sized settlements, monumental buildings and even items of luxury such as jewellery, stone and bronze statuary, etc. Thus, there is a reasonable case for assigning to the spurt in trade a prime role in the emergence of what has come to be known as the Mature (or Urban) stage of the Indus Civilization.

We may now turn our attention to the decline and end of the Indus Civilization. Many a theory has been adduced in this regard. According to one, Indra, as the representative of the Aryans, stood accused for the destruction of this civilization⁶. In this context Wheeler cited also the occurrence of some dead bodies at Mohenjo-daro. However, it has been convincingly shown by Dales⁷ that the so-called massacre wasn't so. Further, Mohenjo-daro has not yielded any evidence of an alien culture in the uppermost levels, signifying the invaders. The "Jhukar" elements, as is now evident, are derivable from a late phase of the Harappa Culture itself.

According to another theory, land-uplift across the Indus some way down from Mohenjo-daro created a substantial bund resulting in a very large lake which engulfed the site. This, according to Raikes⁸, brought about the end of the Indus Civilization.

The theory has been set at rest by Lambrick⁹ and Pos-

⁶ R. E. M. WHEELER, "Harappa 1946: The Defences and Cemetery R37", in *Ancient India* 3 (1947), pp. 58-130.

⁷ G. F. DALES, "The Mythical Massacre at Mohenjo-daro", in *Expedition* 6/3 (1964), pp. 36-43.

⁸ R. L. RAIKES, "The End of the Ancient Cities of the Indus", in *American Anthropologist* 66 (1964), pp. 284-99; R. L. RAIKES, "The Mohenjo-daro Floods", in *Antiquity* 39 (1965), pp. 196-203.

⁹ H.T. LAMBRICK, "The Indus Flood-Plain and the «Indus» Civilization", in *The Geographical Journal* 133 (1967), pp. 483-95.

sehl ¹⁰. Even if it is granted that such a lake was created and it affected Mohenjo-daro, the destruction of the Civilization as a whole cannot be attributed to it. In the same lower Indus valley, sites like Amri continued to be occupied much later. Flooding was not a universal phenomenon. For example, Kalibangan had to be deserted not because of excessive water but a lack thereof. The drying up of the Ghaggar, probably due to some tectonic movement upstream or in the Siwaliks, compelled the inhabitants to leave the site and move northeastwards where the rivers were still alive. Thus, theories suggesting a catastrophic end of the Indus Civilization have to be taken with a pinch of salt. On the other hand, there is enough evidence from a number of sites that the Mature Phase of the Indus Civilization began to degenerate and the final blow came most likely from a steep fall in the trade. This is amply demonstrated by what disappeared out of the salient features of the Mature Phase and what continued as the legacy. Let us take up a few sites to illustrate the point.

Amri Period III is Mature Harappan. Towards the end of this Period, viz. in Subperiod IIID, the devolution becomes evident, marking the advent of an impoverished phase known as Jhukar¹¹. Mughal's recent work at the site has re-confirmed the observation of Casal¹².

Chanhudaro, opposite Amri, has a similar story to tell. The Harappan occupation at the site has been divided into three Periods, numbered I, II and III from top downwards. Making a comparison between Period II (which is earlier) and Period I (later), Mackay states: "A very considerable decline in amenities had evidently taken place in the interval between the two periods"¹³. According to the

¹⁰ G.L. POSSEHL, "The Mohenjo-daro Floods: A Reply", in *American Anthropologist* 69 (1967), pp. 32-40.

¹¹ J.-M. CASAL, *op. cit.*

¹² M. R. MUGHAL, "Jhukar and Late Harappan Cultural Mosaic of the Greater Indus Valley", in C. JARRIGE (ed.), *South Asian Archaeology* 1989, Madison, Wisconsin: Prehistory Press, 1992, pp. 213-221.

¹³ E.J.H. MACKAY, *Chanhudaro Excavations 1935-36*, New Haven, Connecticut: American Oriental Society, 1943, repr. 1976, p. 39.

list of antiquities published by Mackay¹⁴, Period II yielded 15 seals, while Period I only one. More or less the same was the case with weights. This devolution continued further, culminating in the stage which has been labelled as 'Jhukar'.

The recent work of Dales, Meadow and Kenoyer suggests a similar transition at Harappa¹⁵. They have divided the occupational strata of Mound E at the site into five Periods of which 1 and 2 (counting from bottom upwards) are Early Harappan, there also being evidence of transition from the Early Stage towards the Mature in the upper part of Period 2. Period 3 is typically Mature Harappan. Period 4 marks a transition towards the Cemetery H Phase which becomes fully manifest in Period 5.

To proceed northeast into the Ghaggar system. We have already noted that Kalibangan was abandoned, due to the drying up of the Ghaggar, at a time when the Indus Civilization was at its maturity. The site, therefore, provides no evidence regarding devolution. However, further east and northeast, ample evidence is available regarding it.

Take, for example, Hulas in Saharanpur District of Uttar Pradesh¹⁶. Here the settlement belongs to the Late Harappan Stage, since while the pottery does have some typically Harappan shapes there are also some devolved ones. This latter pottery includes jars with long necks and splayed out rims, dishes-on-stand with a prominent drooping of the rim of the dish, miniature pots with pedestalled base, etc. There are no weights, no scales. There is only one sealing which has no animal or other motif but just three letters. No seals have been noted. The degenerate stage of the Hulas settlement is indicated also by the total absence of any town-planning.

¹⁴ *Ibid*, pp. 34-36.

¹⁵ J. M. KENOYER, "Urban Process in the Indus Tradition: A Preliminary Model from Harappa", in R. H. MEADOW (ed.) *Harappa Excavations 1986-90*, Madison, Wisconsin. Prehistory Press, 1991, pp. 29-60.

¹⁶ K. N. DIKSHIT, "Hulas and the Late Harappan Complex in Western Uttar Pradesh", in G. L. POSSEHL (ed.), *Harappan Civilization: A Contemporary Perspective*, New Delhi, Oxford and IBH Publishing Co., 1982, pp. 339-351.

The story of this devolution is further available at the site of Bhagwanpura¹⁷, where there is an overlap between what may be called an amalgam derivable from various pottery-trends – Harappan, Kalibangan I and Baran – on the one hand and the Painted Grey Ware on the other. In this context, it may be stated that there was still no iron. This overlap may have taken place in the last quarter of the second millennium BC.

A similar story of devolution is available from Gujarat. Here we shall take up only two sites, viz. Lothal and Rangpur to illustrate the point. The occupational strata at Lothal have been divided into two Periods, named A and B from bottom upwards. Of these, the former has been subdivided into four Phases, viz. I-IV, while Period B has only one Phase, called V¹⁸. Period A was essentially Mature Harappan, with the characteristic features, viz. town-planning, fortification, an Acropolis, monumental buildings such as the dockyard and warehouse, weights, measures, seals, sealings and pottery with typical fabric, shapes and painted designs. Towards the end of Period A itself, i.e. in Phase IV, one notices encroachments on the streets, deterioration in public drainage, siltation of the dockyard and perhaps a fall in the use of the warehouse. There were changes in the pottery too: for example, the appearance of bowls with a stud-handle and of a black-and-red ware with white-painted designs. By Period B all the three important buildings, viz. the Acropolis, dockyard and warehouse, fell into complete disuse, and so too the fortifications. The houses were now made of brick-bats robbed from the earlier structures, there being no more firing of fresh bricks. In fact, some of the buildings seem to have been made of wattle-and-daub only. Amongst the antiquities, the characteristic cubical weights of chert were no more to be seen. All told, there was a complete loss of the urban scenario.

¹⁷ J.P. JOSHI, *Excavations at Bhagwanpura 1975-76*, New Delhi, Archaeological Survey of India, 1993.

¹⁸ S.R. RAO, *Lothal - A Harappan Port Town (1955-62)*, New Delhi Archaeological Survey of India, Vol. I, 1979; Vol. II, 1985.

Located at a distance of about 50 km. from Lothal, Rangpur continued the story of this devolution¹⁹. Here the earliest Period, I, is microlithic and does not concern us at the moment. Period II is further divided into Subperiods A, B and C. Of these, Period IIA yielded the same material as did Lothal Phase IV, signifying the beginning of the devolution. Period IIB, though having a 3.6-m thick deposit did not yield any evidence of kiln-fired bricks. With the houses constructed of wattle-and-daub, the picture was no different from that of a village. In Period IIC, while some Harappan pottery-shapes, no doubt with certain modifications, were present, there also appeared the Lustrous Red Ware. Amongst the antiquities, a cubical dice marked with 1-6 dots was reminiscent of the Harappan times. No seals were there, but some signs of the Indus script continued in the form of graffiti on the pottery. Period III pottery was dominated by the Lustrous Red Ware and with the white-painted black-and-red ware. The graffiti struggled on and some of the houses were made of mud bricks. But the Indus urbanism noticed in Period A at Lothal was no more to be seen.

Having discussed briefly what transpired in the various regions of the Indus Civilization after the Mature Phase, we may now have a look at the legacy left behind by this Civilization²⁰. At Kalibangan was found an agricultural field in association with Period I. It had a criss-cross pattern of furrow-marks, oriented along the cardinal directions. While the distance between the east-west furrows was 30 cm, that between the north-south set was 1.9 m²¹. It is interesting to note that the same kind of patterning of the furrows obtains even today in northeastern Rajasthan, Haryana, Punjab and western Uttar Pradesh. The Harappan levels at Banawali have yielded a terracotta model of a plough which, again, is more or less of the same type as is in use even now. It is thus apparent that not much change has

¹⁹ S. R. RAO, "Excavation at Rangpur and Other Explorations in Gujarat", in *Ancient India* 18-19 (1962-1963), pp. 5-207.

²⁰ B. B. LAL, *The Earliest Civilization of South Asia...*, cit.

²¹ B. B. LAL, "Kalibangan and the Indus Civilization", in D. P. AGRAWAL and D. K. CHAKRABARTI (eds.), *Essays in Indian Protohistory*, New Delhi, B.R. Publishing Corporation, 1979, pp. 65-97.

taken place in the agricultural methods since the Harappan times up to the recent past, i.e. before the introduction of tractors and harvesters. At Mohenjo-daro was found a terracotta model of an axe with a handle, which, again, is similar to the axes used in the countryside for felling trees and cutting fire-wood.

A similar story can be found in the case of the bullock-carts. Even Marshall noted way back that design-wise the modern Sindhi cart is no different from its Harappan ancestor. Indeed, though surprising, it is a fact that even the gauge of the bullock-cart in the region is the same as discovered in the excavations at Harappa²². An average Harappan house consisted of a courtyard around which were laid out the living rooms. This pattern also has survived in the countryside in northwestern India and adjoining Pakistan. Another item, viz. the *tandūr*, used for cooking in Panjab and Haryana, is no different from its counterpart found in the excavations at Kalibangan²³. Even the present-day three-legged *chakalā* used for preparing the bread is similar to that found in the Harappan context at Alamgirpur²⁴.

The style of wearing and shapes of quite a few ornaments have survived since the Harappan times. For example, the *chauk* found at the Indus sites is worn even now by the womenfolk on their forehead in Panjab and Haryana. The Marwari and Lambadi women put on multiple bangles as did the famous dancing girl from Mohenjo-daro. The wristlets, girdles and anklets have also continued without any noteworthy change. Amongst the objects of toiletry, the square-shaped *kanghī* with teeth on both sides, used in rural areas, goes back to the Harappan times. Likewise, the set of three copper objects – a tweezer, a flattish rod with a pointed end another rod with a small cup at the end, found in the village-markets today – has its near-counterpart in the Harappan repertoire²⁵. Nowadays the tweezer is used for plucking unwanted hair from the inner side of the

²² R. E. M. WHEELER, *op. cit.*, p. 85.

²³ B. B. LAL, *Kalibangan and the Indus Civilization...*, cit.

²⁴ *Indian Archaeology 1958-59 - A Review*, pl. LXVC.

²⁵ M. S. VATS, *Excavations at Harappa*. Vol. II, Delhi, 1940, pl.125, 1.

eyelids, the pointed little rod for cleaning the interspaces between the teeth and the other rod with a cup at the end for taking out mucus from inside the ear. Many of the terracotta toys of the children, e.g. discs, whistles, rattles, masks, etc. have persisted over the millennia.

While it is much easier to pin-point similarity in material objects, one may also try and find out if any of the religious and social practices of the Harappans have come down to us. In this context, one may draw attention to the famous seal from Mohenjodaro depicting a figure seated in a yogic posture and surrounded by animals. It has generally been thought to represent Śiva in his *Paśupati* aspect, though some scholars have disputed this identification. Some objects from the Indus Civilization have been identified as *lingas* and *yonis*. The cult of the Mother Goddess was also present during the Harappan days.—Animal-sacrifice and worship of trees and snakes were also there in the Indus times. Some of the terracotta figurines found at the Indus sites have been thought to be performing yogic *āsanas*.

The Harappan society seems to have been divided into at least three classes, viz. a priestly class, an agricultural-cum-mercantile class and a labour class²⁶. It is not unlikely that this social stratification may have, in course of time, given rise to the later-day caste-system comprising the *Brāhmaṇas*, *Vaiśyas* and *Sūdras*. Since there is little evidence of objects of warfare during the Harappan days, the *Kṣatriyas* as a separate class may not have existed then, but may have emerged later on when the necessity arose.

Now if we take stock of what completely vanished after the Mature Stage we find that weights, measures, seals, sealings and the script did (although some of the signs of the script did struggle on for some time). As we stated earlier in this paper, all these items came up in a big way along with a spurt in trade as all these were needed for handling the increased volume of trade and keeping accounts in an efficient manner. A corollary that follows from this

²⁶ B. B. LAL, "A Glimpse of the Social Stratification and Political Set-up of the Indus Civilization", in G. L. POSSEHL and M. TOSI (eds.), *Harappan Studies*, I (1993), pp. 63-71.

interconnection between trade and these categories of objects is that their disappearance in the early centuries of the second millennium BC would indicate that the purpose for which these were needed had ceased to exist, in other words, there was a steep fall in trade about that time. Further, just as a sharp spurt in trade around 2600-2500 B.C. resulted in the boosting of the economy and all-round rise in the standard of living culminating in the highly urbanized Indus Civilization, the steep fall in trade some time in the first quarter of the second millennium BC resulted in a pronounced economic impoverishment which, in turn, took away all the glamour of the urban life. The Indus Civilization did not disappear one fine morning through an Aryan invasion or catastrophic floods but slumped back to the rural life, as indicated by the long list of the legacy discussed above.

The foregoing scenario still leaves a few unanswered questions. In particular, what was it that brought about a steep fall in trade? Did any major climatic change or the wearing out of the landscape through overuse bring about a sharp decrease in agricultural production hitting the economy so badly that recovery was not possible? Or did the purchasing capacity of the countries abroad with which the Indus Civilization had trade-contacts diminish around the beginning of the second millennium BC, as indicated by a reduction and subsequent disappearance of Indus trade-markers, viz. seals, weights, etched carnelian beads, etc. in these foreign lands? Let it also be added that a steep fall in trade may not have been the only factor, though it seems to have been an important one, in the collapse of the Indus Civilization. Maybe some yet unknown politico-administrative upheaval also played a part in this drama. But of that we know very little. Great hopes are pinned on the decipherment of the Indus script one day, which, it is hoped, would unravel many of the mysteries pertaining to this civilization.